

# TOMPS Mould Making & Casting Guide 2006

## Latex Moulds & Former Choice

This is probably the simplest of mould constructions but where a GRP or RTV Silicone Mould may need to be made in 2 or more parts for separation and demould, latex provides very interesting properties.

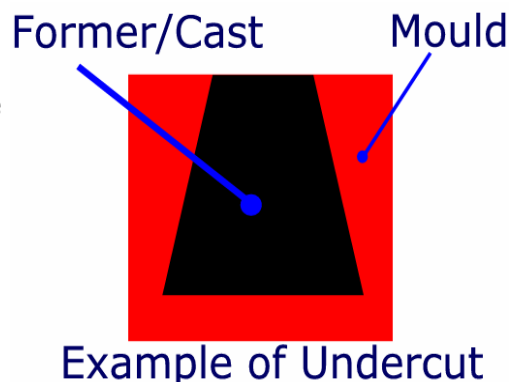
Liquid Latex is a pre-vulcanised rubber emulsion in solution with water and ammonia. A good quality moulding latex will contain at least 60% rubber solids. It is applied to a former in layers by either dipping or painting to create moulds for figurines or garden ornaments, but may also be used to make theatrical masks, props and fake wounds.

Its a very cheap compound, easy to use, bio degradable, naturally occurring and non toxic. However it has its limitations. It is not so durable and is an air dry compound and takes some time to complete a mould.

That said it's a very stretchy material which reproduces detail very well and replicates quite accurately . It releases from undercuts very well where a hard silicone or GRP Mould would point blank refuse to. Read on for information regarding undercuts.

The diagram opposite shows a very defined easy interpretation of an undercut, where there is a part of the former or cast that will not release due to its shape. With latex the moulding compound is very flexible and will release. In fact it will release more undercut than a Silicone or GRP. There are limits of course!!!!

However it is not compatible with all Polyester Resins, particularly the Water Clears, where cure inhibition prevails leaving a tack finish to the cast.



### Choice of Former

#### **Plaster of Paris**

By far one of the best to choose. Easily carved and shaped with quality metal craft tools it is also very porous, enabling the water content to be removed into the plaster allowing faster drying and de-moulds.

#### **Clay**

Works well but should be fully dry or fired to achieve a similar result to plaster.

#### **Wooden Formers**

Work well, ensure the timber is very smooth and porous to work like plaster or clay.

#### **Plasticine**

These are very forgiving but will need to be painted due to oil content, dipping is not so efficient. The oils in the material may weaken the latex when cured, shortening its life.

#### **Non-porous Formers**

Polyester or Polyurethane Resin, glazed clays, plastics, metals can all be used, certain metals will react with the latex and cause mould weakening.

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## Latex Moulds

Dipping works best using a porous former like plaster, dried/fired clay or wood. However you can dip non porous items like the resin chess piece we are replicating in the pictures. Painting is normally employed with non porous items but takes longer to dry and usually needs the latex to be thickened.

With a porous former you will find the latex thickens almost on contact as water is drawn into the former. At the same time air bubbles will appear. Use a small brush to burst these in the surface of the latex. The first coat is by far the most important!! When painting these bubbles tend to be burst with each stroke of the brush.

First attach the former to something you can hold away from the face to be moulded. In this case we have drilled a small pilot hole and used a BZP Screw. Find a suitable depth receptacle and fill almost to the top with latex. The pot should be as high as the piece, don't fill to the top or it will run over the edges during dipping.

Dip the piece in the latex and rotate gently to help disperse air, remove, brush and dip again. Now allow this first coat to dry (10-20 mins at room temperature, longer in cold conditions).

Dip again and build up 3 or 4 layers of latex. For a more durable mould have more thickness, for more flex and stretch take less thickness. Now thicken some latex using our Professional Thickener. Its designed to chemically bond with latex and not mess with its properties. DO NOT use talc, French chalk, wall-paper paste, gelatine or anything else! These WILL weaken you mould. Add about 5-10g to 100g latex.

Paint a uniform layer onto the piece as shown, then suspend in a warm room or oven (max 70 Celsius) to speed dry. After around 24-48 hours it should be fully dry.

You are now ready to remove from the former. Raw, recently cured latex is sticky when in contact with itself. Use either talc or washing up liquid to lubricate the exterior of the mould. DO NOT USE ANY OILS!!! Oil will weaken latex and cause it to split when stretched. Slowly and gently remove the latex skin. The mould will self-reverse, so pop it back the right way round. Dry off the washing up liquid and give a few hours to ensure its completely dry.

The mould is now ready to use. Support it in a bed of sand or similar to ensure that the mould doesn't deform under the weight of its casting media. See the section on casting media for what to use to make replicas of what you have just moulded!!

A well made latex mould should provide you with many fills and de-moulds. Treat it with respect when de-moulding to avoid tearing it. DO NOT use any oil for release at any time, this will significantly weaken the latex and cause it to tear. Always lube up the outside when de-moulding.

